Minutes of the ARISE+ workshop on the Support ASEAN ATM Master Plan – ASEAN-wide implementation of agreed initiatives, activity number 4.2. 2.

# Held at Pathumwan Princess Hotel, Bangkok on 10-12 September 2018

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| Participants: | ARISE+  Mr. David Waller, (ARISE+ Project Manager) (part-time)  Mr. Frank Manahutu (EASA representative to SE Asia) (part-time)  Mr. Anders Hallgren (ARISE+ ATM Expert)  Mr. Paul Bosman (Head of Aviation Cooperation and Strategies Division, EUROCONTROL)  Mr. David Batchelor (Head of International Affairs, SESAR JU)  Mr. Daniel Cruz Bardera (EASA)  Cambodia  Ms. Tith Phoumith (SSCA Cambodia/ Dep Dir ANS and Safety Deptm)  Mr. Oun Makara (SSCA Cambodia/ Deputy of Air Traffic Service Bureau)  Mr. Vichheka Buntong (Cambodia ATS /ATM Officer)  Laos  Mr. Thanongdeth Nalisak (Lao DCA/ Chief ATM Section, ANS Division)  Mr. Xaygnasith Xouymanivong (Lao ATM/ATC Watch Supervisor & ATC Instructor)  Malaysia  Mr. Nasuruddin Zainol Abidin (DCA Malaysia)  Ms. Dayang Zarina Abang Alli (DCA Malaysia)  Mr. Abu Talib Bin Ahmad (Advanced Air Traffic (M) Sdn Bhd, Malaysia)  Mr. Ngm Chee Heng (AAT, Malaysia)  Myanmar  Mr. Mr. Soe Naing (DCA Myanmar/ Assistant General Manager ATM)  Ms. San San Aye (DCA Myanmar/Manager ATM)  Singapore  Mr. Michael Shee (CAA Singapore/ATC Manager, ATM Operations Planning)  Ms. Peiru He (CAA Singapore/ATC Manager, System Architecture)  Ms. Yung Tzen Lim (CAA Singapore/ATS provider)  Mr. Md Faisal bin Md Saleh (ATM RI Singapore/Programme Director)  Thailand  Mr. Preeda Youngsuksathaporn (CAAT/ Deputy Director General)  Ms. Tawika Huayhongtong (CAAT/ Air Navigation Services Standards Manager)  Mr. Jakrin Kutantham (CAAT/Air Navigation Services Standards Manager)  Ms. Piriyakorn Tungaroonsanti (CAAT/ Aeronautical Information, AIS Department)  Ms. Vanatta Noipan (CAAT/ ATM Standards Division)  Ms. Amornrat Jirattigalachote (AEROTHAI/ Strategic Planning Assistant Manager)  Ms. Siree Vatanavigkit (AEROTHAI/ Strategic Planning Manager, Engineering)  Mr. Pongabha Abhakara ((CAAT/ATM Standards Division)  Mr. Popporn Kosaikanont (AEROTHAI/ Air Traffic Engineering Manager)  Mr. Woraphan Muangsri(AEROTHAI/ Airspace Design Assistant Manager)  Mr. Dhivatbodi Sivajdhanachoti (AEROTHAI/ Strategic Planning Assistant Manager)  Ms. Rose Aksornkitti (AEROTHAI/ Executive ATM Network Officer)  Mrs. Jittima Asawachaiporn (AEROTHAI/ Aeronautical Information Manager)  Mr. Sarawoot Rungruengwajiake (CAAT/ Air Navigation Services Standards Department)  Ms. Papassrin Jirawiwatkul (CAAT/ Chief of Aeronautical Information, AIS Department)  Mr. Sutat Jongsintawee (CAAT/ Air Navigation Service Officer)  Ms. Thitibhorn Prathumchai (CAAT/ATM Standards Division)  Pantip Changpradit (AEROTHAI)  Mr. Jitanan Tipayasak (CAAT/ ATM Standards Division)  Mr. Pichet Huayhongthong (CAAT/ATM Standards Division)  Vietnam  Mr. Le Quoc Khanh (Vietnam ATM Coop./Dep DG)  Mr. Mr. Chu Minh Duoc (Vietnam ATM Coop./ Deputy Director Of ATS Department) |
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## Agenda

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## Opening and administrative matters

2.1 On behalf of CAA Thailand, the meeting was opened by Mr. Preeda Youngsuksathaporn, Deputy Director General CAAT. Mr. Preeda thanked the various ASEAN States for leaving a gap in their busy agendas to come to Bangkok and participate in this important workshop which was a first step in the development of road maps for the deployment of the prioritised initiatives of the Master Plan. He also thanked EU and EASA for providing assistance and technical expertise to ASEAN in the further development and implementation of the ASEAN ATM Master Plan.

2.2 The ARISE+ Project Manager, Mr. David Waller, then presented the meeting with an introduction to project. Mr. Waller explained how the EU and South East Asia had worked together for a long time now, and how important it was to continue to work together. Mr. Waller also referred to the European experience and pointed out how important it was to ensure regional integration, and how all involved stakeholders benefitted form regional cooperation in ATM.

## 2.3 Mr. Waller explained the two complementary projects, ARISE- and EU-South ASIA APP, hoping that the two would be able to support the ASEAN Member State in their efforts to implement their ATM Master Plan

## 2.4 ARISE+ then thanked CAA Thailand for all the effort they had put in to prepare for the workshop and make the event possible.

## Agreement on workshop setup and objectives

## 3.1 ARISE+ went through administrative matters. The proposed agenda and the setup of the workshop were agreed.

## 3.2 ARISE+ also highlighted previous developments leading up to the finalisation and endorsement of the first version of the ASEAN ATM Master Plan. The results of the discussions in the previous AATIP workshops were summarized and ARISE+ complimented the ASEAN Member States on the finalisation of their Master Plan.

## 3.3 The objectives of the workshop were to 1) support the ASEAN Member States in the continued deployment of the initiatives agreed as priorities in the ASEAN ATM Master Plan; 2) share European experiences on issues that needs to be considered when handling region-wide implementation and deployment of agreed ATM improvements; and 3) reach ASEAN-wide agreement on the structure and main content of the road maps required for each of the five identified priorities.

3.4 It was agreed that whilst recognising that the workshop was not a decision-making forum, an agreed summary of the deliberations should be drawn up and agreed by participants, and these conclusions should be forwarded to the appropriate decision-making forums at both national and ASEAN levels.

## Outcomes of the meeting

4.1 The global perspective, ICAO Seamless ATM Plan

4.1.1 Mr. Len Wicks, Regional Officer Air Traffic Management/Search and Rescue, ICAO RO, Bangkok, gave the meeting a very informative presentation on the important links between the ASEAN ATM Master Plan and the APAC Region Seamless ATM Plan. Mr. Wicks highlighted the importance of working together in the work to improve ATM and complimented the ASEAN States on their collaboration in the development of the Master Plan.

4.1.2 After having highlighted to the workshop the massive further increase in demand that was expected for this region, Mr. Wicks provided the workshop with a number of challenges that they were facing. Much more effort was required to provide the ATM capacity required, and he very much appreciated if the APAC region moved from following Europe and North America, to instead be the leaders in innovation in ATM globally.

4.1.3 Mr. Wicks pointed to a number of issues needing immediate attention to ensure that the region did not further slide with regards to ABU implementation target dates. He urged the States to not consider the implementation of ATFM measures as a solution, but instead concentrate on providing the additional capacity required. Aerothai replied that the development of the required added capacity was a time-consuming effort, and that there was a need for an efficient application of ATFM in the meantime.

4.1.4 Mr. Wicks pointed out a few issues he had found when studying the Master Plan. On the note that there was a need for more detail, it was agreed that the required details would be developed when developing the road maps for the deployment of the agreed first-priority initiatives. If there would not be a change to the decision to not distribute the plan outside the ANSPs of the region, there was a great risk that there would be a lack of buy-in from those that was required to implement, such as the airlines.

4.4.5 Mr. Wicks also expressed concerns over target dates differing from those in the Seamless ATM Plan, and finally, urged the participants to carefully consider adding further reporting requirements on States that are already expressing a concern over “reporting fatigue”, by focusing on identifying problems with implementation and the gaps that remained, rather than duplicating any part of the regional system.

4.2 General introduction – ATM Planning in Europe

4.2.1 Mr. David Batchelor, Head of International Affairs, SESAR JU, provided the workshop with a comprehensive general introduction to how ATM planning is conducted in Europe. Mr. Batchelor explained the challenges they were facing in Europe, which were very similar to the ones in the ASEAN area. In Europe there had been a move towards a “Single European Sky” which was an attempt to enhance ATM performance in a collaborative manner.

4.2.2 The EUR Master Plan was the roadmap that was considered to drive the modernization of the European ATM system. The plan took a flight centric approach, focusing on a flight through a number of key improvement areas. SEASAR JU is a partnership project, and Mr. Batchelor described the SESAR 2020n programme, and explained how they work together to provide the required improvements.

4.2.3 In response to a query why there was such a gap between the seed in developments in other areas, such as telecom, and ATM, Mr. Batchelor referred to the safety-critical nature of ATM, and that standardization on the side of the regulator often took very long.

4.2.4 The participants took note of the general principles driving ATM innovation in Europe and the significant collaborative effort that had been required. Malaysia, supported by CAA Thailand, highlighted the need for ASEAN to consider a more comprehensive collaborative working arrangement where ATM experts could get together to discuss the development and implementation of region-wide ATM improvements.

4.3 The implementation of the ASEAN ATM Master Plan

4.3.1 Ms. Tith Phoumith, Dep Dir ANS and Safety Department, SSCA, explained the background for the development of the plan, Ms. Siree Vatanavigkit, Strategic Planning Manager Engineering, AEROTHAI, Thailand continued with an explanation on how they had arrived at the priorities of initiatives as presented in chapter 5 of the plan. Ms. Amornrat Jirattigalachote, Strategic Planning Assistant Manager, AEROTHAI, Thailand, continued by explaining in more detail the different initiatives, the eight first-priority initiatives, and the five ones in need of regional collaboration since they were not expected to deliver the expected benefit if not implemented collaboratively. The participants welcomed the presentation from the ASEAN ATM Master Plan development team.

4.3.2 The requirement on States to report development were discussed, and the need to avoid duplication of reporting requirements was noted. The issue of more details in the plan was also discussed and it was agreed that this would be provided when developing the road maps for deployment of initiatives. ICAO commented that in some instances the target date of the plan differed from the targets in the Seamless ATM Plan and urged to ensure that the target dates remained the same.

4.3.3 Cambodia described how they have set up a national working group on Master Plan implementation and informed the workshop that they had found that they would benefit from some support from the EU-EASA projects on issues such as how to prepare a business case with the proper justification to present to top-level management.

4.4 The European ATM Master Plan

4.4.1 Mr. Paul Bosman, Head of Aviation Cooperation and Strategies Division, EUROCONTROL, provided the workshop with a description f the architecture used when developing the EUR ATM Master Plan. He comprehensively explained why we need a Master Plan and what you will find in the plan, the content.

4.4.2 The reason why we need a Master Plan, explained Mr. Bosman, was because it had been identified that there was a need to streamline European ATM investments, to avoid fragmentation and duplication in R&D, to deliver Solutions that meet our future performance needs, and to clearly position Europe’s ATM in the worldwide context.

4.4.3 Mr. Bosman explained the planning process used when developing the EUR ATM Master Plan and the division of the plan into three different levels, the executive level, the architecture & planning level, and the implementation level. He pointed out that this was not just a paper exercise, the roadmap was the instrument driving the modernisation of the European ATM system.

4.4.4 The EUR Master Plan is consensual and transparent, explained Mr. Bosman, and he urged the ASEAN Member States to ensure a wide distribution of their Master Plan, the only way of starting to achieve the commitment required for all stakeholders in performing their part in the implementation work. On a question about what to do if there were no reaction from stakeholders, Mr. Bosman answered that he would recommend a visit to the more important stakeholders to ensure their understanding and achieve their engagement and commitment.

4.4.5 Regarding enforcement and compliance from stakeholders, Mr. Bosman explained that all the improvement initiatives were discussed at length at various European meetings during their development, and in most cases all stakeholders were already convinced of the importance of the implementation. In addition, if a certain initiative from SESAR was considered to be beneficial it could also be included in an update to the SES regulation, and thereby become mandatory for all EU Member States.

4.4.6 ICAO added how important they considered it was to gain ownership from high-level management, and the participants recognised the need to ensure the involvement and buy-in from senior management. Each Member State was encouraged to ensure that senior management signs off deployment plans.

4.5 European Implementation and Monitoring Process

4.5. Mr. Bosman continued by discussing the various aspects of the process that has been put in place in Europe in order to record and monitor progress of the agreed improvement initiatives. He gave the workshop a broad overview of the SES implementation planning and reporting mechanisms, at both European and local levels, covering topics such as the ATM Master Plan Level 3 Implementation view, the Implementation Objectives, the tools and processes used, and what criteria was used to determine implementation progress. He also explained who were considered to be the stakeholders and the users.

4.5.2 Internet was used to show how easy it was for the ASEAN experts to consult the documentation on monitoring that was produced in Europe. Most of the material, apart from some sensitive information, is readily available on internet.

4.5.3 The link to the ICAO ASBUs was highlighted, and Mr. Bosman explained how the two reporting requirements were linked, and for the ECAC States there were no double reporting required for them to comply with ICAO monitoring requirements, all information needed were extracted from the reporting under the ESSIP/LSSIP process.

4.5.4 Reporting is structured in three different levels, the strategic view, the deployment view and the engineering view, each providing a bit more detail than the previous one. The strategic view is for management, while the engineering view is for the ones that are directly involved in the details of the implementation of the initiative. Mr. Bosman gave the workshop detailed examples of how reporting is organised in the three different views.

4.5.5 Mr. Bosman also explained the European model for how to arrive with a certain percentage of implementation in a particular activity, Stakeholder line of Action (SloA). He also emphasized the very important notion adopted in Europe that an activity could not be considered to be planned until there was tangible evidence that budget and effort had been allocated to that particular activity.

* 1. The Master Plan Portal

4.6.1 Mr. Bosman used the internet to show the participants how to connect to the EUR Master Plan portal and how to navigate to find the various information available on that website.

4.7 The five initiatives identified in the ASEAN ATM Master Plan as requiring ASEAN-wide harmonised implementation

4.7.1 The workshop then decided that in order to use the expertise of Mr. Bosman and Mr. Batchelor in the most efficient way, and since they would not be attending on the third and last day, it would be better to address the specificities of the five initiatives already on day 2. The first presentation was given by the lead countries for the PBN enroute initiative, Laos and Cambodia. The presentation detailed the status of the implementation on PBN enrute, and it highlighted the issues that needed attention, such as Airspace Structure, Navigational Aids, Safety assessment, Ops Approval, Aircraft equipage, ATC Training and PBN Airspace Concept Development, and Quality Assurance for PBN Instrument Flight Procedure Design (IFP).

4.7.2 In the discussions that followed it was highlighted that in order to be able to determine stakeholder line of actions, it was necessary to first agree on which navigation specification that was going to be used, and to do that in a collaborative way would be preferred by the users. Based on ongoing developments it looked like the RNAV5 implementation activity was more like a gap analysis, while the RNP2 implementation probably required attention being paid to all the issues referred to above.

4.7.3 Mr. Bosman informed that there were no implementation objectives on PBN enroute in Europe to compare with, but that some guidance could be gained by reviewing implementation objective NAV03, RNAV1 operations in TMA, a project where stakeholders and line of actions could be similar to the initiative on PBN enroute.

4.7.4 The next presentation was on the requirement to implement ATFM services. The lead countries were Thailand and Singapore. In support of this initiative they had already established an ATM Implementation Support Group, and they had focal points nominated from all ten Member States, both from regulators and ANSPs. In the presentation they went through the prioritised elements and explained how they have agreed that there was a need for support in establishing a scientific method to measure capacity.

4.7.5 At the first meeting in the implementation support group, they had provided the participants with homework that should be presented at the next ARISE+ workshop, activity 4.2.3 taking place in Jakarta on 24-26 September. Each member state was asked to come up with a list of what they considered was missing/confusing in the Distributed Multi-Nodal ATFM project.

4.7.6 Malaysia queried the objective of phase 1 of this activity, stating that they were considering moving to level 3 already now. The representatives from the lead countries did not see any problem with that.

4.7.7 As a preparation for the discussions on day 3 of the workshop, the participants then discussed which stakeholders could be considered to be involved, and what stakeholder lines of action could be perceived.

4.7.8 The third presentation was on the initiative detailing the move towards AIM. Thailand and Singapore were the lead countries, and they presented the status in the region with regard to the implementation of the various projects described in the ICAO Roadmap on the move from AIS to AIM.

4.7.9 Mr. Bosman followed on with a presentation on the implementation of AIM in Europe, explaining that there were implementation delays not only in the APAC region, but also Europe had their problems with the move towards AIM. He did though point out the importance of having a robust QMS system, which is considered the basis for the implementation of phase 2 and 3.

4.7.10 Next followed two very informative presentations on the status of the two remaining initiatives, CRV and AIDC, by the respective lead countries, Thailand and Malaysia. Both contained important information that was used in the discussions on day 3.

4.7.11 Mr. Bosman informed the meeting that apart from implementation objective ATC17, which is an initiative to further improve the application of OLDI, Europe did not have any implementation objectives that was directly relating to CRV or AIDC. The corresponding activities in Europe, PENS or OLDI, were already applied operationally. There were however objectives in the document on similar activities, such as ATC17, that could be used by the ASEAN experts when trying to identify stakeholders involved and the possible actions that each of those stakeholders should be committed to do.

4.8 Paper Planning exercise

4.8.1 Day 3 of the workshop was dedicated to a workshop activity where the participants were divided in five groups, one for each activity. The task was to discuss how to best organise Development Programmes for the first-priority initiatives in order to provide for an ASEAN-wide, harmonised and efficient deployment of the required ATM improvements.

4.8.2 Following the presentations by each of the group, it was recognised that there was a need to harmonise the way these activities organised and monitored progress in implementation of the initiatives. The Development Team accepted the responsibility to prepare a template for such harmonised process, which would be presented to the upcoming ATTC for their discussion.

4.8.3 The result of the different activities is found at attachment 1.

## Conclusions and agreement on next steps

5.1 The participants at the meeting agreed that the following should be recorded as general conclusions from the workshop:

* + The participants took note of the fact that the APAC region will soon have more traffic than Europe and North America together;
  + Recognised the challenges facing the region and took note of the request from the ICAO representative to address ATM improvements in a collaborative manner;
  + Took note of the general principles driving ATM innovation in Europe and the significant collaborative effort that is required;
  + Recognised that the European ATM Master Plan is the roadmap driving the modernisation of the European ATM system;
  + Understood the planning processes used when developing the EUR ATM Master Plan and the division of the plan into three different levels;
  + Noted the European ESSIP/LSSIP processes, and how reporting is divided in three different views, strategic, deployment and engineering views; and
  + Noted the presentations from the lead countries on the status of developments in the five prioritised initiatives.

5.2 The participants recognised the need to ensure the involvement and buy-in from senior management during the various stages of developments. Each Member State was encouraged to ensure that senior management signs off deployment plans.

5.3 The ASEAN ATM Master Plan only contain high-level descriptions of the first-priority initiatives, and it was recognised that there was a need for more detailed explanations on what stakeholders need to do. The participants agreed that instead of making changes to the Master Plan, the required details would be entered during the process of developing the road maps that would be required to drive a harmonised ASEAN-wide deployment.

5.4 The participants then discussed the way forward in developing the road maps required to ensure harmonised deployment of the initiatives. On the last day a group activity to discuss and identify stakeholders and activities required for each initiative was conducted.

5.5 The need for further collaboration involving all the ten Member States in the development of the road maps was recognised, and it was agreed that the Development Team will present to the ATTC a proposal for how this collaboration could be organised.

5.6 The group also recognised the need to have focal points from all ten countries for each of the initiatives and agreed to request the ATTC to ask for this nomination.

5.7 It was recognised that here was a need for harmonisation between the five initiatives with regards to how they developed the road maps and the monitoring mechanisms. It was agreed that the Development Team will prepare input to ATTC on a harmonised template on how to organise and monitor progress in implementation of the initiatives.

## Closing Remarks

6.1 ARISE+ then thanked the CAA Thailand for an excellent organisation of the workshop. He also thanked all the participants for their active and professional participation which had helped to make it possible to reach the objectives of the workshop.

6.2 Following this, Mr. Preeda Youngsuksathaporn, Deputy Director General CAAT, closed the workshop by thanking the ARISE+ team and all the participants at the workshop for sharing their valuable knowledge and expertise.

6.3 Mr. Preeda explained that he was very happy with the results of the workshop, and he recognised the importance of the collaboration required to progress the tasks at hand. He would be heading Thailand delegation to the coming ATWG meeting, and he would like to propose Thailand to be the "mobilising secretary" of the development team because he strongly felt that there should be a dedicated State to take this mission and make the plan moves forward. This secretariat job would help by centralising the information, restructuring, readjustment, centralised template making as well as gathering data, and be the body who will put up needed resources for the tasks.

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